MIT's Oldest and Largest Newspaper

thetech.com

The Tech

Established 1881

Volume 137, Number 23

Thursday, September 21, 2017

WEATHER, p. 2

THU: 73°F | 60°F
Cloudy with high winds

FRI: 62°F | 60°F
Rainy

SAT: 68°F | 62°F
Partly cloudy

Ig Nobel Awards Ceremony features vaginal music player

Nobel laureates, vampire bats, identical twins, and more to 'make people laugh, then think'

By Sheila Baber

On Sept. 15, the annual Ig Nobel Awards Ceremony took place under the watchful gaze of marble statues in the historic Sanders Theatre in Harvard. A parody of the actual Nobel Prizes, the Ig Nobel Awards are given by the *Annals of Improbable Research* Magazine to ten researchers from various fields who conduct improbable research, that is, research that "makes people laugh and then think."

Winning topics ranged from the fluid dynamics of spilled coffee, the length of old men's ears, and the efficacy of vaginal music players.

Winners received a prize of 1,000,000,000,000 Zimbabwean dollars and a replica of a human head sporting a question mark (to tie in with this year's theme, "Uncertainty").

As usual, the Ig Nobel Awards Ceremony lived up to its lightheartedness — there were half-naked silver human "spotlights," hilarious demonstrations of the winning experiments, a Not Safe for Work Indicator (for the squeamish factor in some of these demonstrations), and plenty of participation from the audience through paper airplane deluges (where audience members threw paper airplanes at a "target" dressed up in a bullseye suit) and a competition to win an empty cardboard box.

Scattered throughout ceremony were musical acts from "The Incompetence Opera," a three-part musical featuring a troubled psychologist obsessed with the Peter Principle and the Dunning-Kruger Effect (an explanation of how incompetent people climb up the social hierarchy) and a dancing man dressed in an MIT sweatshirt.

Also present were Nobel Laureates Eric Maskin (2007 Economics), Oliver Harts (2016 Economics), Roy Glauber (2005 Physics), and Jerome Friedman (1990 Physics) (who showed up in a video), as well as past Ig Nobel Laureates such as John Culvenor (2003 Physics) who researched the forces required to drag sheep across various surfaces and who spoke at MIT on Saturday for the Ig Informal Lectures.

There was also a healthy dose of serious academia in the form of 24/7 lectures, where scientists gave a 24-second technical abstract of their research, then a seven-word summary that anyone could understand. One of the lecturers, who investigated human response to AI, summarized her work as "Robots that talk are perceived as stupid."

Among the audience members were Eden Solomon '20 and Zhijing Jin '19 , two MIT students whose mutual friend sang in the chorus of the Incompetence Opera. Regarding the whole affair, Solomon '20 said that, "[she] didn't know what to expect, but it was fantastic."

When asked about the most shocking thing from the awards ceremony, both Solomon and Zhijing agreed that the BabyPod (the vaginal music player) "topped it." Both agreed that they would try to attend the event again next year.

For those looking for a good laugh and then a good thought, the webcast of the Ig Nobel Prizes is available on YouTube.

Jaden Smith attends 3.091, speaks with department heads

MIT prof praises Smith as "so smart"

By Sharon Chao

Teenaged actor and model Jaden Smith was spotted at MIT last Monday.

Smith sat in on Professor Jeffrey Grossman's 3.091 (Introduction to Solid State Chemistry) class, and met the heads of the Department of Civil and Environmental Engineering (CEE), Plasma Science and Fusion Center, and MIT MakerSystem.

Drew FitzGerald, the creative director of CEE, coordinated Smith's day-long visit. FitzGerald previously served as the Creative Director of Urban Music and Soundtracks at MCA Records of Universal Studios, and worked with Jaden Smith's s father, Will Smith, in that capacity.

"I've known [the Smiths] for about twenty years, and we're very familial," FitzGerald said in a phone interview with *The Tech*. "As Jaden and Willow [Jaden's younger sister] grew older, they started to have a lot of environmental questions about climate change and renewable energy. I became their appointed educator for those topics."

FitzGerald developed a curriculum for the two, and collaborated with the Smiths to create JUST Water, a company that sells responsibly sourced spring water in paper and plant based plastic bottling, in September 2015.

"Our goal was to put a socially and environmentally impactful product on the market," FitzGerald said.

"[Smith] and I are exposed to a lot of cosmetic solutions, and we'd rather be closer to people who are actually creating plausible, real-world solutions. Those are people at MIT. They're makers," FitzGerald said.

At MIT, Smith and FitzGerald first sat in on Grossman's lecture on the history of the electron. Smith had wanted to meet Grossman after watching a YouTube video of a lecture Grossman gave for an event honoring the late Professor John Wulff, according to FitzGerald.

Afterwards, the three talked for an hour about education and the role of science and technology in making the world a better place, Grossman told *The Tech*.

"He had a lot of great questions about renewable technologies and sustainability, and what the future could

Jaden, Page 2

Image resolution enhancer wins top prize at HackMIT

Select hackers try out new MS tech

By Meenakshi Sivapriya

HackMIT 2017, a 24-hour hackathon for undergraduates from across the world, took place Saturday in the Johnson Athletic Center. The winning project was The Pixelator, a lightweight program to enhance low-resolution pixelated images, followed by runner-up PlotRoomba, a program which uses Wolfram Mathematica inputs to trace out graphs through a Roomba.

A total of 32 prizes were awarded to accommodate different types of hacks developed in what first-time hacker Kushagra Pandya '19 described to *The Tech* as a "sleep-deprived, stressful environment." Around 4500 people registered and 1254 were admitted to the competition.

Microsoft provided ten HoloLens kits and ten Acer Head Mounted Displays (HMDs) for hackers to leverage in their projects. "This year, by student demand we brought back [the HoloLens], and also included the Acer HMDs which are not out yet, giving MIT hackers an early access. We went through 40+ applicants and picked 20, depending on the innovation of the ideas and whether they were technically feasible within a short time frame or not," Mary Baker, a Microsoft representative, told *The Tech*.

"We wanted dedicated hackers who knew what to do with [the HoloLens], instead of taking it and then making up their mind," Adina Shanholtz, another company representative, added. Mentors were available at all times to assist participants with questions regarding both hardwares and softwares.

Pandya's team was among those selected to use the HoloLens. "It was a great experience," he said. "Although the HoloLens needs more documentation for the developers to work on."

Per tradition, there were also multiple talks and sponsor stalls set up throughout the event, which began 10:30 a.m. on Saturday and ended 3 p.m. the next day. "The stalls were very interesting, but they could have been more spread out as there were a lot of crowding in that area," a member of team TBD told *The Tech*.

Many hackers also had issues with WiFi connectivity. When asked about this problem, Jason Seibel

HackMIT, Page 9

NUR MUHAMMAD SHAFIULLAH - THE TECH

A part of the Student Loan Art Program Exhibition by MIT's List Visual Art Center which ran from Sept. 5 – 17.

The Engine funds its first startups

Incubator seeks to make Boston epicenter of breakthrough tech

By Sandhya Kalavacherla

The Engine, an incubator and science and technology start-up accelerator founded last year by MIT, released Tuesday the names of the first seven companies it will invest in. The startups work in a broad range of fields, from biotechnology to renewable energy.

The Tech participated in a press conference call with Katie Rae, CEO and Managing Partner of the Engine, and Israel Ruiz, MIT's Executive Vice President and Treasurer, and chair of The Engine's Board of Directors.

During the call, Rae explained that The Engine was born when MIT recognized that some of the "most important inventions were getting stuck in the lab because they were underserved by the current venture capital market."

The Engine thus provides a path

Engine, Page 9

IN SHORT

The deadline for UROP for Direct Funding is Thursday, September 21.

Finals schedules have been released: go to finals.mit.edu to see when your finals are.

Send news tips to news@the-tech.mit.edu.

A NEW SCHOOL OF COMPUTING?
Turing laureates say that EECS alone can't meet MIT's computer science needs. **OPINION, p. 4**

TAKING 8.01 TO THE NEXT LEVEL
How much force do you need to drag a sheep? **NEWS, p. 2**

THE AMERICAN JAMES BOND
Mitch Rapp's big screen debut is both fun and dull. **ARTS, p. 8**

HACKMIT
You hacked, we photographed. Did your shot make it in? **PHOTO, p. 6**

FIX CME BEFORE YOU REVIVE IT
The UK exchange program wasn't as rosy as some alums make it seem. **OPINION, p. 4**

SECTIONS

Opinion 4
Photo 6
Arts 7
Fun Pages 10
Sports 12

WEATHER

Tropical Storm Jose says 'Happy official first day of autumn!'

By Lily Dove
STAFF METEOROLOGIST

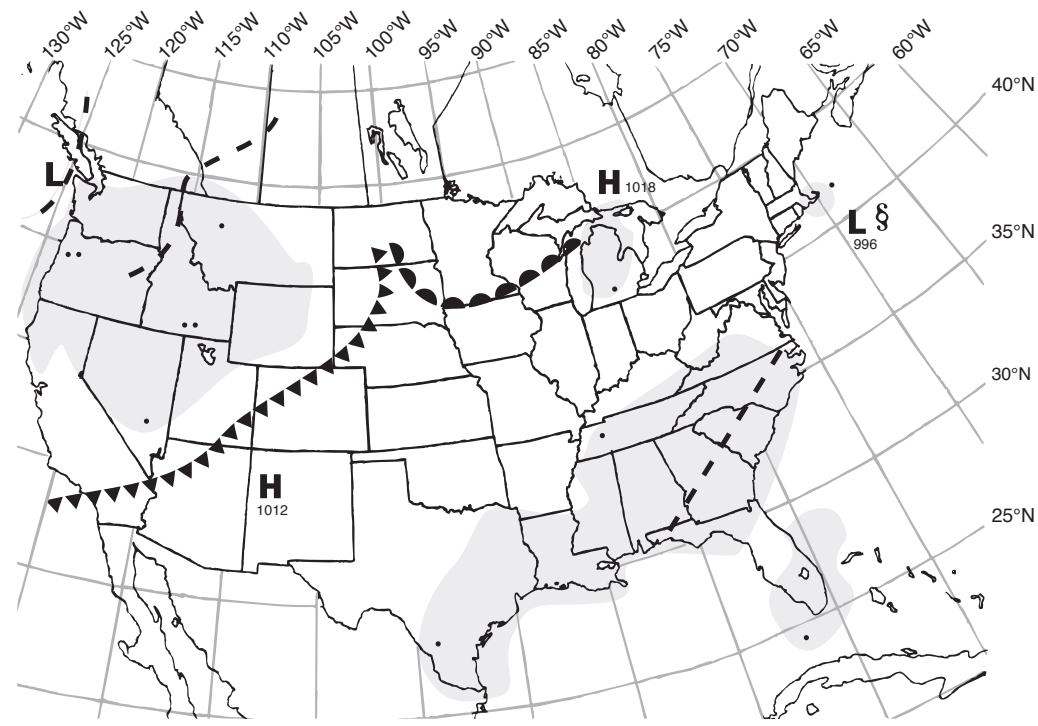
The official start of Autumn comes to Cambridge with rainy and cloudy weather. Luckily, the weekend is looking less rainy; some clouds are to expected but the winds will be dying down and the temperatures should be rising again. The current weather conditions are a result of Tropical Storm Jose, which is sitting out in the Atlantic to the southeast of Massachusetts, spinning itself into a Tropical Depression and then into its own extinction. If you go sailing in the next few days, you can say you've gone sailing in a hurricane - just make sure you make sure you clear it with the folks at the Sailing Pavilion.

Meanwhile, Hurricane Maria is causing massive damage to some Caribbean islands; after hitting Puerto Rico earlier this week, the storm is moving to pass by or over the northern shore of the Dominican Republic and the Turks and Caicos by Friday afternoon. Hurricane Maria will likely then make its way up the U.S. East coast a few hundred kilometers offshore. Models have yet to pin down the storm's predicted landfall location.

Happy First Day of Autumn!

Extended Forecast

Today: Partly cloudy with high winds. High of 73°F (23°C) with winds 15-20 mph from the North.
Tonight: Mostly cloudy with high winds. Low of 60°F (16°C) with winds 15-25 mph from the North.
Tomorrow: Rainy and cloudy. High of 62°F (17°C) and low of 60°F (16°C) with winds 15-20 mph from the North.
Saturday: Some rain in the morning but partly cloudy all day. High of 68°F (20°C), low of 62°F (17°C) with winds between 5-15 mph from the North.
Sunday: Cloudy with some sun. High of 80°F (27°C), low of 66°F (19°C) with low winds from the Northeast.



Situation for Noon Eastern Time, Thursday, September 21, 2017

Weather Systems	Weather Fronts	Precipitation Symbols			Other Symbols
			Snow	Rain	
H High Pressure	Trough	Showers	* ▽	• ▽	Fog
Low Pressure	Warm Front	Light	*	•	Thunderstorm
§ Hurricane	Cold Front	Moderate	**	••	Haze
	Stationary Front	Heavy	⁂	∴	Compiled by MIT Meteorology Staff and *The Tech*

Ig Nobel winners present 'improbable' work at informal lectures

By Samuel Nitz

Several of the 2017 Ig Nobel prizewinners presented their research Saturday to the public at the Ig Informal Lectures in 10-250. Two previous prizewinners presented their winning research as well.

Lecturers were kept within a five-minute limit by a novel timing system: a panel of audience members seated at the front of the room acted as a cat chorus, erupting in meows with each passing minute.

After the five minutes elapsed, the audience had the opportunity to ask questions of the lecturers.

Ten Ig Nobel prizes are awarded each year by the magazine *Annals of Improbable Research* to work that "makes people laugh and then think," according to their website. This year, prizes were awarded in a wide range of fields including fluid dynamics, cognition, peace, and obstetrics.

The lectures began with Dr. John Culvenor, who won the Physics prize in 2003 with his paper "An Analysis of the Forces Required to Drag Sheep over Various Surfaces." Culvenor and his team investigated the physics of Australian sheep shearers dragging sheep by the front legs across floors, and looked at how that affected the shearers ergonomically.

The 2017 Peace prize was awarded to a group that discovered that learning to play the didgeridoo is an effective treatment for sleep apnea and snoring, because of the way it stimulates and exercises the upper airways. The group members in attendance, Alex Suarez and Dr. Milo Puhan, brought in one of their specially-designed instruments and gave an impromptu performance as part of the lecture. Dr. Nicole Sharp, best known for her blog Fuck Yeah Fluid Dynamics, followed their lecture with a short presentation and demonstration on the fluid-dynamic aspects of their research.

Jiwon Han won the 2017 Fluid Dynamics prize for research he conducted while in high school on how best to hold a mug of coffee to minimize spillage while walking. He found that a "claw" grip—that is, with the fingertips gripping the outer rim of the mug, worked better than holding the side of the mug. Walking backward also worked effectively because people's irregular gait while walking backward creates less resonance in the cup.

It is often said that playing Mozart to a child in utero makes the child smarter. But how can we make sure the fetus hears it? This year's Obstetrics prizewinners, a team of researchers from Spain, investigated whether fetuses responded more strongly to music played via speakers placed on the abdomen or to music played via an intravaginal speaker. They measured the responses with an MRI and found that the fetuses made more facial movements (including sticking out their tongues) when sounds were played with the intravaginal speaker.

The final speaker was Thomas Thwaites, who won last year's Biology award for his project in which he attempted to live as an alpine goat for a few days. This project took him all over the world, involving consultations with people of all kinds, including a Danish shaman, a neurologist, and, naturally, a man in charge of a goat sanctuary. During the question-and-answer session, one audience member simply asked him, "Why?" His response: "It was a dream.... Why go to the moon?"

vThe lectures and Thursday's prize ceremony were live-streamed on the Improbable Research Facebook page. The full videos of both events are available there and on the group's YouTube channel.

REPORTER'S NOTEBOOK

PKG debuts annual fair to highlight community service

Non-profits and social enterprises recruit MIT students

By Hanna Kherzai

For their first annual Social Action Fair last Thursday, the Priscilla King Gray Public Service Center (PKG Center) hosted a variety of local community partners to present volunteer, work study, and paid internship opportunities from Greater Boston in Lobby 10.

The venue highlighted the stark contrast between MIT and these organizations despite their remarkably close proximities. Under the dome, the metaphorical bubble in which we reside during our time at the Institute never seemed so prominent.

So often, MIT students yearn to make a tangible difference. At the fair, organizations from around Boston and Cambridge presented numerous ways to do just that.

An undergraduate student who attended the fair, Mariam Dogar '20, said "I think it's really great that something like this is at MIT because ever since I came to campus I was interested in doing something in the Greater Boston area, but then psets happened and you get so caught up in the bubble but this is a reminder...that people, students, my age are getting involved in things like this."

At each table, representatives from non-profits, social enterprises, and government agencies stood at booths and explained their missions. They spoke of their histories with MIT students, and when reflecting on past contributions and initiatives, their eyes would light up. Every representative had a personal anecdote related to a positive experience they had gained from their work.

The fair presented a wide variety of options that catered to MIT students' skillsets. Many focused on biotech, healthcare systems, tutoring, and coding skills. Boston Cares was created to match volunteers with specific opportunities based on their preferences and skills. Boston Medical Center was also in attendance and was looking for volunteers and interns to aid in their Autism Program, whose teen program was borne by an intern in previous years.

Tutoring Plus spoke more specifically on their "I Build" workshop that encourages middle school students to explore engineering solutions in daily life. The Petey Greene Program allows students to TA and tutor prison inmates throughout the year.

One student volunteer described her last year with the program: "[i]t keeps me more grounded in daily issues facing people in the greater Boston community outside of this teeny tiny bubble where the greatest problems I think about most of the time are my psets. It helps me get in touch with these much larger systemic problems a lot of people are facing and lets me be able to make a tiny droplet of impact in addressing those problems."

Jaden Smith discusses 'potential uses of fusion energy' with profs

Jaden, from Page 1

be. What's being done to use the sun for lighting? What's being done in water purification and in solar harvesting and storage?" Grossman said. "He's so smart, passionate, interested, and curious."

Smith and FitzGerald then spoke with Markus Buehler, the department head of CEE, and three CEE undergraduate students.

"Smith was interested to learn more about our work in Course 1, and I thought there really isn't a better way to share what we're doing than letting our students speak directly and share their passions," Buehler said in an email to *The Tech*.

David Wu '19 was one of the students who elaborated on his work and its impact to Smith.

"I talked about my work in the Megacity Logistics Lab last summer [and] the summer program I did freshman year, ONE-MA3 [Materials in Art, Archaeology, and Architecture]," Wu said in a phone interview with *The Tech*. "We analyzed archaeological sites, mosaics, and pottery in order to learn how to better sustain the future."

Afterwards, Smith met with Professor Martin Culpepper, who is in charge of MIT's Makersystem. Smith wanted to meet Culpepper after hearing him speak at an MIT Better World Event, a showcase to celebrate MIT and its current efforts to better the world, in Los Angeles in February 2017. "[Culpepper] blew everyone away with his energy and passion, so [Smith] wanted to meet him," FitzGerald said.

Finally, Smith and FitzGerald spoke with Plasma Science and Fusion Director Dennis Whyte and toured the center. "I showed them the control room and the hardware of the Alcator C-Mod [a compact, high magnetic field plasma device used for fusion research]," Whyte said in a phone interview with *The Tech*.

The three discussed the potential uses of fusion energy and current work on it. "[Smith] seemed interested in fusion being a carbon-free energy source that could be important in relieving poverty," Whyte said.

This is not the first time Smith's name has been linked with MIT: in a 2015 interview with GQ, Smith said he wanted to set up offices at MIT so he "can learn and bring in new technologies into the world."

Santander®

START HERE TO MAKE IT HAPPEN
SANTANDERBANK.COM/STUDENT

[1] Other fees may apply, including a Paper Statement fee if you elect to receive paper statements. Refer to your fee schedule for details.

[2] **WHO QUALIFIES:** Student Value Checking is available to students 16 through 25 years of age. Once you reach 26, we will convert your Student Value Checking to another checking product. Students who currently have a personal checking account or who have had a personal checking account with Santander Bank in the last year are not eligible for this offer. Offer is only available to residents of NH, MA, RI, CT, DE, NY, NJ, or PA. Offer subject to change at any time. Santander team members are not eligible.

HOW TO RECEIVE THE BONUS: Get $25 when you open a new Student Value Checking account between July 1, 2017 and September 30, 2017, with minimum opening deposit of $10. Make 8 debit card transactions that post to your account within 60 days of account opening.

TIMING AND OTHER CONDITIONS OF THE BONUS: Your Student Value Checking account must be open and in good standing to be bonus eligible. Bonus payments will be made to your account within 120 days of account opening. Cannot be combined with other offers. One bonus per customer. The bonus is considered interest and will be reported to the IRS on Form 1099-INT. If multiple accounts are opened with the same signer, only one account will be eligible for the bonus.

Santander Bank, N.A. is a Member FDIC. ©2017 Santander Bank, N.A. All rights reserved. Santander, Santander Bank, the Flame Logo, Santander Select, Bravo and Simply Right are trademarks of Banco Santander, S.A. or its subsidiaries in the United States or other countries. Mastercard is a registered trademark of Mastercard International, Inc. All other trademarks are the property of their respective owners. 24508 7/3/17

JUGGLE MIT
CIRCUS SHOW
Saturday 9 / 23
Kresge Auditorium - 7 pm
MIT Students: $8 General: $15
10 professional acts from circuses around the world
Funded by the Association of Student Activities and the deFlorez Fund for Humor.

OPINION OPINION OPINION

GUEST COLUMN

The Cambridge-MIT Exchange

An ungraceful end to an era

By Miranda McClellan

The Cambridge-MIT Exchange (CME) has ended after 15 years of offering a unique direct enrollment at one of the best European universities, the ability to learn on a rigorous education system, and the opportunity to explore Europe. Cambridge students love the hands-on challenge of MIT, and MIT students experience the relatively relaxed terms with few homework sets. I enjoyed coxing for my college's boat club, joining an art society, and re-discovering my joy of running along the River Cam. However, the experience of the 2016-2017 cohort of CME was tainted by overwhelming administrative issues, lack of communication, and the tangible lack of concern for our academic or personal well-being. After hearing news of the program's end, a few alumni of the exchange are rallying to revive the program; however, their years of removal from the program and its flaws shield them from the ways in which the program is unfair and, at times, harmful to MIT students.

I will explain the principal errors that need to be resolved before MIT renews any exchange relationship with Cambridge University and its colleges.

The exchange abruptly ended because British Petroleum (BP) withdrew their financial support for Cambridge students. While participating in CME, MIT students pay MIT tuition, and Cambridge students pay tuition to Cambridge University. Current British law states that British universities can only charge their students 15% of tuition while studying abroad, so BP funded 85% of their tuition fees. The issue with this circumstance is two-fold. First, the BP funding only benefits Cambridge students, so the Cambridge administrators and Cambridge organizers of the exchange should bear the burden of finding a new source of funding for the student fees. Their inability to do so shows both disorganization and a lack of commitment to the exchange. Secondly, British tuition fees are only £9,000 per year for EU members in comparison to the $48,452 that MIT students would pay before financial aid. Although MIT adjusts financial aid for students studying abroad, MIT students are paying magnitudes more for inferior administrative and mental health support systems, lacking tutorial services, and limited course selections. This is wholly unfair to MIT students, especially those ineligible for financial aid.

Cambridge University is divided into 31 autonomous colleges, each with its own endowment, its own claim to teaching staff from various departments, and its own private residences for students. Colleges can be as influential on a student's experience as the departments they choose. MIT students on CME swap places with a cohort of students from Cambridge, and this includes taking their "place" in their respective colleges at Cambridge. In my situation, I was placed in St. Catharine's College, which, including me, had only two computer science students in my year. Along with another MIT student, I was forced to attend supervisions at Churchill College where the supervision groups were regularly upwards of 15 people when they were meant to be 2-to-3. I was met with repeated resistance from my college and no help from the CME administrators when I asked to take the mock exam given to the other computer science students at Churchill College because it was for "college members only." I regularly had supervisions at 9 or 10 p.m. on the weekends because of the small teaching staff and lack of available times. A member of the 2015-2016 cohort also was placed in St. Catharine's and complained of similar unfair treatment, especially in comparison to what was offered at wealthier colleges. Not only were his experiences ignored, but when the same issues resurfaced with me, the Cambridge side administrators only intervened once the situation had deteriorated to the point that I wanted to leave the exchange after Christmas. The system of directly and semi-blindly tying MIT students to a college hinders their opportunities and diminishes the responsibility for CME administrators feel to help students.

From informal talks with other members of the 2015-2016 cohort, the lack of communication was the most profoundly felt issue of the exchange. The former CME coordinator for the MIT side left her position in Spring 2016 after recruiting students for the exchange and conducting interviews. After she left, MIT students received almost no guidance about how to choose classes, where we would live, or how to plan the very important junior year while studying abroad. Once in Cambridge, the decentralized nature of the colleges and the fact that the Cambridge-side exchange coordination is very engineering-centered expanded the communication issues. Questions about which classes would receive MIT credit were unanswered; some students were left off their college's enrollment lists; requests to drop classes were never fulfilled; we lost access to our Cambridge academic records without warning; and emails about exams or transcripts have been regularly ignored by the Cambridge side coordinator. In a typical year, the MIT coordinators come in the fall to check in on students; however, this year, they did not meet with us until February. While they met with us one-on-one, their visit provided no alleviation to the issues students faced. The profound lack of communication left us feeling forsaken by administrators on both sides.

The alumni who wish to continue the Cambridge-MIT Exchange are only concerned with finding a solution to the funding issues while ignoring the vast amount of work needed to fix the existing system of college assignment and communication that prevent the exchange from fulfilling its potential. MIT has issues of its own to resolve in its student exchange opportunities, and should not only take on the burden of finding funding for Cambridge nor the burden of resolving their administrative issues, simply in the name of continuing the exchange. The exchange ended due to all of its unresolved issues and the way in which these issues affected funding. The exchange should not be continued until all of these issues are adequately reviewed, reported, and resolved by the universities and colleges involved.

Miranda McClellan is a member of the MIT Class of 2018.

Ud tem iure tie tate exerostrud esto exerote

Quat praeseq uiscill andrerostie magna consequissi.Um eui te feu facil u

By Opinion Writer

STAFF REPORTER

[Your Article Goes Here]

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc nulla dolor, sagittis ut ultricies blandit, volutpat quis velit. Praesent tortor arcu, tincidunt eget vehicula quis, gravida et purus. Integer laoreet purus id velit vestibulum eu blandit felis lobortis.

Sed vel diam sapien, at sodales sapien. Donec sed libero est, at ornare neque. Integer ut nibh massa. Read this far looking for hidden messages? I commend you! Ut dapibus augue et lacus lobortis semper. Proin tempor quam eget ante porta vel pellentesque nulla bibendum. Donec elit quam, auctor eu viverra quis, consequat quis nisi. Vestibulum ante enim, bibendum vel condimentum quis, vehicula eu magna. Pellentesque vitae leo sit amet est semper malesuada. Suspendisse eu dui in lorem venenatis pellentesque vel quis tortor.

Nulla id [illegible] eros. Sed ut [illegible] Etiam neque leo, dapibus sollicitudin ultricies eu, vulputate ut ipsum. Praesent pretium placerat rhoncus. Aliquam erat volutpat. Etiam adipiscing porttitor sodales.

Nam eu mi augue, id tempor ligula. Ut ac tincidunt mi. Integer porttitor diam ut arcu convallis rutrum. Donec cursus, mauris non adipiscing pharetra, nibh arcu fermentum diam, lobortis lacinia diam nisi at justo. Morbi malesuada donlan escrow manifold tellus nibh scelerisque ut imperdiet arcu blandit. Donec vitae dictum neque. Donec vitae semper ligula. Nullam pharetra, mi non fringilla tempus, leo justo luctus elit, ut malesuada sapien enim ac risus. Fusce nulla mauris, aliquam ut facilisis eu, tristique non lorem. Be an editor for The Tech, and you too can add fake messages to lorem ipsum text. Maecenas risus dui, tempus vitae gravida in, tristique et dolor. Quisque lacinia tellus eget leo volutpat vulputate. Aenean dapibus tellus eu nunc blandit facilisis. Pellentesque nec nisl in leo dictum gravida et sit amet justo. Etiam sollicitudin nisl id urna ultrices a pulvinar tortor blandit.

Sed lacinia justo [illegible] lutpat, elit velit malesuada dui, ac dignissim nisi nulla quis urna. Classes start tomorrow, and you're still reading this? Nam aliquam, eros nec consectetur iaculis, sem lacus auctor elit, vel posuere sapien turpis rutrum lorem. Duis augue nulla, pellentesque ut varius ut, rhoncus sit amet ligula. Curabitur sapien eros, lacinia vitae lobortis ut, blandit sed eros. Duis dui ipsum, convallis vel aliquam vitae, gravida sed erat. A lolcat should have gone here. Aliquam porttitor, erat et pellentesque porta, nisi nunc consectetur lorem, sed dictum mi orci ac turpis. Nullam rhoncus porta ante nec eleifend. Maybe another one here. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Aenean pretium ultrices lorem, sit amet eleifend est congue et. Nullam consequat, turpis at laoreet venenatis, justo ligula lobortis metus, et dapibus justo diam at enim. Donec adipiscing fermentum scelerisque. Duis vel vestibulum lacus. Ut nec tortor nisl, ut vehicula lacus. Mauris tortor tortor, (it repeats the same word? That's lame) pretium eget mattis dictum, eleifend bibendum metus. Praesent enim nulla, gravida non auctor quis, molestie vel sapien. Praesent [illegible] dolor, at ultricies erat.

Duis posuere sem ipsum. Donec volutpat suscipit ultricies. Quisque tempor aliquet leo eget mattis. Suspendisse scelerisque faucibus blandit. Maecenas purus elit, cursus id aliquam in, viverra non quam. Duis luctus ante sed massa pellentesque eu ultrices dolor porta. Nunc orci turpis, lobortis ac euismod ultricies, feugiat sed lacus. Suspendisse viverra commodo sem, id ullamcorper urna vestibulum sed. Join opinion. Join opinion. Join opinion. Fusce ornare consectetur risus, a consequat metus cursus sit amet. Suspendisse porttitor [illegible] erit nisl fringilla. Maecenas commodo eros quis dolor lacinia pharetra.

Quisque vel blandit dui. Etiam mattis, felis non auctor commodo, nibh libero fermentum orci, at laoreet augue nibh non turpis. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos himenaeos. Aenean vel libero sit amet sapien lobortis dignissim vel et est. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos himenaeos. Nunc in convallis ante. In dolor est, vulputate sed suscipit ut, venenatis quis metus. Suspendisse tincidunt mauris ut nunc sollicitudin sed mollis enim adipiscing. I really hope we get more opinion staff. Duis turpis est, mollis nec tempus sit amet, mollis vitae quam. Mauris auctor, magna placerat [illegible] vel placerat [illegible] sapien non [illegible] scelerisque. Duis viverra interdum luctus. Nam suscipit, sapien at rhoncus auctor, dolor augue vulputate nisi, non eleifend eros velit non libero.

Phasellus pretium sem eget risus mattis eu feugiat purus laoreet. Suspendisse potenti. Sed vestibulum hendrerit dapibus. Cras rhoncus lobortis eros in porta. Vestibulum non elit justo. Sed vehicula tempus dolor at vestibulum. Etiam ornare dapibus elit, id dapibus metus [illegible] feugiat nec. Fusce sodales eleifend suscipit. Aliquam rhoncus nisi eget neque ullamcorper viverra. Fusce ipsum mi, elementum nec luctus non, fringilla at dui. We could really use another lolcat right here too. In vitae turpis eget ipsum ultrices varius. Nam scelerisque congue lorem vel tempus.

Nullam sem est, consequat iaculis tincidunt quis, congue vel sem. Duis nisi turpis, euismod eget suscipit

Write for Tech Opinion

join@tech.mit.edu

HACKMIT

HackMIT, MIT's annual undergraduate student hackathon, took place on campus Sept. 16 and 17.

PHOTOGRAPHY BY NUR MUHAMMAD SHAFIULLAH—THE TECH

MUSICAL REVIEW

The Phantom lurking inside the Opera House

The timeless classic *The Phantom of the Opera* storms into Boston for the show of a lifetime

By Rose Wang and Nathan Liang

Loved by band geeks and theatre junkies alike, Andrew Lloyd Webber's *The Phantom of the Opera* effortlessly combines mystery, suspense, romance, and emotional musical numbers all in one dark, harrowing tale.

Set in early 18th century Paris, France, this musical focuses on the talents of young Christine Daaé (Eva Tavares) and how both her beauty and singing ability draw in the disfigured Phantom (Derrick Davis) and childhood friend Raoul (Jordan Craig). Obsessed with Christine's melodic voice, the Phantom constantly tries to draw her under his own spell of musical allure while maintaining his opera house. Meanwhile, Raoul aims to love Christine while protecting her from the manipulative Phantom. As this dynamic love triangle progresses, there is also a tense struggle between the opera house owners, Messieurs Firmin (David Benoit) and André (Edward Staudenmayer), and the Phantom. They don't believe in his existence, but face constant punishment and ridicule at the hands of the Phantom whenever his demands aren't met.

Story aside, there are many novel elements to the musical that leap out at the audience and break the traditional onstage limitation. The tech crew creates stunningly detailed set pieces that enhance the environment of the scenes and perfectly match the mood of each scene. The Phantom's lair is dreary and poorly lit by candlelight. Dry ice, smoke and fog machines heighten the lair's sense of eeriness. In contrast, the opera house owners' office is brightly decorated with gaudy red walls, golden trim, and pretentious paintings.

However, the most interesting piece on stage is probably the revolving set itself. One moment, the stage is set for an opera put on by the musical's opera house. Then within seconds, the stage revolves to appropriately show the steps to the docks and then spins slowly to match the progression of the characters' boat ride over the lake to the Phantom's lair. Personally, I don't think either of us had ever seen such an innovative and practical set design, and it astounded us how well utilized it was throughout the musical.

Audience immersion is further encouraged by the engaging and dynamic cast. Drawing onlookers in with his powerful voice then succeeding to frighten them with his freakish nature, Derrick Davis plays a truly emotional and haunting Phantom. Despite his apathy towards murder, the Phantom is easily empathized with when he reveals his loneliness through lack of compassion from others, especially when Christine turns away after he confesses his love for her. You feel for the dejected person the Phantom is forced to be by way of his abnormality; yet you also feel for Christine as you watch her struggle between her love of Raoul and his normal, safe life and the Phantom and his stirring way with music.

Overall, the Broadway musical is a delight for all audience viewers; it brings modern elements to the art of theater and draws in the audience. Broadway makes sure that the musical doesn't stay dormant in its 2D frame on stage; the cast and crew bring the musical to life with the notorious chandelier hung right over the audience, dialogues with the viewers, and acts among audience seating. The musical numbers and dynamic cast are also as memorable as ever and add to the neverending charm that is *The Phantom of the Opera*.

We highly recommend you attend the musical showing. *The Phantom of the Opera* is an enjoyment for all kinds of theater-goers (or non theater-goers) of all ages, backgrounds, and interests!

The Phantom of the Opera

Directed By Laurence Conner

Music by Andrew Lloyd Webber

Lyrics written by Charles Hart and Richard Stilgoe

Orchestration by David Cullen and Andrew Lloyd Webber

Boston Opera House

Running until Oct. 1

THEATER REVIEW

Everything you've ever, and never, done

Constellations at the Central Square Theatre explores the nature of time, the multiverse, and love

COURTESY OF A.R. SINCLAIR PHOTOGRAPHY

Nael Nacer & Marianna Bassham in *Constellations*.

By Alexandra Sourakov
STAFF WRITER

In *The Conduct of Life*, Ralph Waldo Emerson wrote that "The secret of the world is the tie between person and event. Person makes event and event person." We define the moment and, reciprocally, the moment defines us. *Constellations* explores the infinite possibility that inhabits such a moment. Roland and Marianne meet at a barbeque and fall in love. Roland and Marianne meet a barbeque and her opening line about licking elbows just doesn't have that same flirtatious ring. Roland and Marianne meet a barbeque, and after two minutes of the exact same conversation as in the previous scenario, never speak to each other again. The only difference? A matter of timing—one of them is already married. In *Constellations*, there is not a question of which one actually happens. They all happen, just in different universes.

Roland is a beekeeper and Marianne is a cosmologist — an interesting juxtaposition, presenting two different views of the world. Roland admires the "quiet elegance" and purpose with which the bees live. Marianne assures Roland that we are nothing but a collection of atoms. Time is irrelevant, purpose absurd. In such an unstructured piece, the beautifully programmed background lights and sound serve as an anchor for the audience and transitions between scenes.

Nael Nacer (Roland) and Marianna Bassham (Marianne) are actors of prodigious versatility. No two scenes are contiguous chronologically, emotionally, or psychologically — they cannot fall into a comfortable rhythm of character and tics, because the person hurling insults now is not the same person who was sobbing piteously in the previous scene. They are acrobats of tone and body language. Because the audience is watching them act out the different turns a particular scene can take, we are hyper-aware of the details. We're still trying to piece together the story, to discern a pattern, so when Marianne steps back several steps during the conversation, we notice, because she did not do that in the last sequence. This imbues every action with more meaning than it would have in a typical, non-multiverse play.

As would be expected of a play that tackles the meaning of time and the possibility of a multiverse, this is not a story that starts at the beginning and comes to a happy or sad end. That kind of convention is a literary byproduct of deterministic living. The play presents a sort of puzzle: are there scenes that pair with each other? Is this barbeque sequence a direct predecessor of this ballroom scene? What is undeniable is that each sequence of events results in a different Marianne and a different Roland. Just as you will be a slightly different you for having seen this play. I did not expect to grow so attached to Roland and Marianne. Initially, the repetitiousness of the vignettes is a bit jarring, and I wonder to myself how many times I can listen to Marianne asking Roland if he can lick his elbow, but in the end, their last (first?) dance together brings tears to my eyes.

Constellations

Written by Nick Payne

Directed by Scott Edmiston

Sept. 7 – Oct. 8, 2017

Central Square Theatre

ARTS ARTS ARTS

ARTS ARTS ARTS

Startup for accelerating creation of GMOs wins MIT funding

Engine, from Page 1

for these "tough tech" inventions to commercialize and reach the public.

According to The Engine's mission as stated on its website, it works "to move hard tech from the lab into the light."

"These companies need the [kind of] patience that MIT has shown since its founding," Ruiz said.

The Engine defines "tough tech" as breakthrough technology that involves the physical world and has implications that reach across many diverse fields, such as robotics, biology, and artificial intelligence. These types of inventions often need a much longer time frame to market and reqvuire highly specialized equipment — conditions that prevent these companies benefitting from the current venture capital structure.

The Engine attempts to solve these problems through its four main components: a closed, long-term capital investment fund of $200 million; the Engine Room, a space which has highly specialized equipment that can be rented and shared among the companies; a mixture of ready-to-go lab and office space; and the Engine Network, a group of experts, alumni, and 14 corporate partners who serve as a support system for the founders in numerous different ways, including acting as pilot customers and confidants to the founders.

The seven "tough tech" start-ups chosen by The Engine include Analytical Space, which enables delivery of high-speed data from space to improve tasks like city planning and climate monitoring, and Kytopen, which developed technology that "modifies microorganisms 10,000 times faster than current state-of-the-art methods."

In order to be considered to be a part of The Engine, the companies have to be in tough tech space and have "incredible teams" who "have to want to be entrepreneurs," Rae said. While these companies do not have to be from MIT, they have to be based in the Boston area, since The Engine seeks to make Boston an epicenter in the "tough tech" field.

Rae told *The Tech* during the call that these start-ups can be placed into three stages based on their individual timelines. Two of the seven companies are in the "just out of the lab" stage, and receive smaller dollars and focus on trying to cross important milestones. Four of the companies are in the "company formation" stage, and thus have well thought out plans with fully formed teams. One of the companies is in the "company building stage," and so already has early customers and is beginning to generate revenue.

The full list and descriptions of the chosen start-ups are available on the MIT News site.

The Tech is looking for
interactive graphic designers
to join its online media team.

No experience necessary. We'll give you the tools to get you started.

This is a great way to gain **valuable job experience**, **build a strong web portfolio**, and create designs that will be submitted for **national awards**.

For more information, email join@tech.mit.edu

IntelligenceCareers.gov/NSA

NSA IS **COMING** TO YOUR **CAMPUS**

ASK US ABOUT STUDENT PROGRAMS!

Remarkable student and career opportunities.
Recruiters ready to chat. Mark your calendar now!

Massachusetts Institute of Technology

Fall Career Fair, Interviews
Friday, September 29 - Saturday, September 30

NSA
WHERE INTELLIGENCE GOES TO WORK®

U.S. citizenship is required.
NSA is an Equal Opportunity Employer.

Want to be Editor in Chief of *The Tech*?
Most EICs start as news writers.
join@tech.mit.edu

HackMIT attendees lament Wi-Fi troubles

HackMIT, from Page 1

'19, a HackMIT organizer manning the Help Desk, told *The Tech* that it was because not enough IP addresses were allocated for the event. The discrepancy was resolved by IS&T soon after.

Some hackers complained about the talks overlapping with hacking time. Scheduling conflicts hit the HoloLens teams particularly hard: "The teams working with the HoloLens were separated from the main hackathon venue, which undermined the main point of a hackathon — socializing," Naman Maheshwari, a student from the University of Wisconsin, Madison, told the *The Tech*. "We also had to miss most of the talks and food too."

Despite a few glitches, most participants *The Tech* spoke with said that they would return the next year.

FUNFUNFUNF

Procter & Gamble, Skydio, Cinch Financial, Amplitude Analytics, General Motors
Appian, Northrop Grumman Corporation, Cornerstone Research
GBjobs, Zenuity Inc., Qadium, Sony Interactive Entertainment, PA Consulting Group
McKinsey & Company, US Navy, Intel Corporation, Exxon Mobil Corporation
Tessella, Capital One, GRAIL, Mark43, InterSystems, Oliver Wyman
Lifescience Dynamics, Vatic Labs, Stroud International, Addepar
GoDaddy, Quantlab Financial, Sandia National Laboratories
Apple, Asana, IBM, A9, Old Mission Capital LLC

Genser Energy Africa Inc. (Genser), Etsy, Millennium Space Systems,
Sonosm Balyasny Asset Management, NITS Solutions, DoorDash, Magna International,
Nasdaq, Merck, Cogo Labs, Klaviyo,, Los Alamos National Nuclear Laboratory,
Cummins Inc, Lockheed Martin, Bain & Company, LevelUp, Cruise Automation, Quantcast,
Fitbit, The Boston Consulting Group, MongoDB Inc., Exponent, Pendo.io,
Optum a UnitedHealth Group Company, FeatureX, GoerTek Electronics Inc
Karem Aircraft Inc., The MITRE Corporation, Chevron Corporation, Dice, Ford Motor Company
Advanced Micro Devices (AMD), CMA Strategy Consulting, Analytical Graphics Inc.
AppDynamics, Blizzard Entertainment, Cascodium Inc., Accenture, DRW
Analysis Group, Applied Predictive Technologies, Indeed Inc., MathWorks
Nutanix, Blend, D. E. Shaw Research, Salesforce, Creare

CAREER FAIR WEEK EVENTS

SCHEDULE

Monday, September 18

Info Session: Citadel
5:00 p.m. | 4-370

Tuesday, September 19

Info Session: Shell Oil Company
6:00 p.m. | 4-237

Monday, September 25

Coffee Chat: Oliver Wyman
11:00 a.m. | W20-407

Coffee Chat: PA Consulting Group
12:00 p.m. | W20-491

Coffee Chat: Exponent
1:00 p.m. | W20-201

Coffee Chat: Teach for America
5:00 p.m. | TBD

Info Session: Chartwell Consulting
7:00 p.m. | 4-370

Coffee Chat: Cornerstone Research
8:00 p.m. | 4-270

Tuesday, September 26

Coffee Chat: Accenture
11:00 a.m. | W20-201

Coffee Chat: GoDaddy
12:00 p.m. | W20-307

Info Session: iboss
1:00 p.m. | W20-201

Coffee Chat: Tech Square Trading
3:00 p.m. | W20-407

Info Session: CMA Strategy Consulting
3:00 p.m. | W20-407

Info Session: Microsoft
5:00 p.m. | TBD

Info Session: Palantir Technologies
6:00 p.m. | 4-370

Info Session: Vecna Robotics
7:00 p.m. | 4-163

Info Session: RightHand Robotics
8:00 p.m. | 3-370

Wednesday, September 27

Coffee Chat: InterSystems
12:00 p.m. | W20-306

Coffee Chat: Tessella
12:00 p.m. | W20-407

Coffee Chat: Hudson River Trading
1:00 p.m. | W20-201

Coffee Chat: Procter & Gamble
2:00 p.m. | W20-491

Coffee Chat: GRAIL
3:00 p.m. | TBD

Coffee Chat: US Navy
4:00 p.m. | W20-407

Coffee Chat: Quantlab Financial
5:00 p.m. | TBD

Info Session: The Boeing Company
6:00 p.m. | 4-163

CEO Talk: Green Hills Software
6:00 p.m. | 3-370

Coffee Chat: Exxon Mobil Corporation
7:00 p.m. | 4-270

Info Session: General Electric
7:00 p.m. | 54-100

Info Session: Yext
8:00 p.m. | 4-163

Thursday, September 28

Info Session: Facebook
10:00 a.m. | W20-306

Coffee Chat: Intel Corporation
10:00 a.m. | W20-307

Coffee Chat: Asana
11:00 a.m. | W20-201

CEO Talk: MultiMechanics
11:00 a.m. | W20-491

Tech Talk: NVIDIA
11:00 a.m. | TBD

Coffee Chat: IBM
12:00 p.m. | W20-306

Info Session: Factual
1:00 p.m. | W20-491

Tech Talk: MemSQL
1:00 p.m. | W20-201

Info Session: Heap
2:00 p.m. | W20-407

Info Session: JetBrains
2:00 p.m. | TBD

Coffee Chat: Qadium
2:00 p.m. | W20-306

Coffee Chat: Addepar
3:00 p.m. | W20-201

Coffee Chat: General Motors
3:00 p.m. | Johnson Overhang

Info Session: Improbable
3:00 p.m. | TBD

Info Session: ASAPP
4:00 p.m. | W20 PDRS 1&2

Info Session: ClearMotion
4:00 p.m. | W20-491

Info Session: Tower Research Capital
4:00 p.m. | TBD

Info Session: Yelp
4:00 p.m. | W20-407

Coffee Chat: Bridgewater Associates
5:00 p.m. | TBD

Info Session: Daimler AG
5:00 p.m. | TBD

Alumni Q&A: Oracle
5:00 p.m. | TBD

Info Session: Five Rings Capital
6:00 p.m. | 1-242

Info Session: Meteor
6:00 p.m. | 2-131

Coffee Chat: Sandia National Laboratory
6:00 p.m. | 4-163

Coffee Chat: Vatic Labs
6:00 p.m. | 4-149

Coffee Chat: AT&T Entertainment Group
7:00 p.m. | TBD

Tech Talk: Dropbox
7:00 p.m. | 4-270

Info Session: Two Sigma
7:00 p.m. | 4-370

Coffee Chat: Zenuity
7:00 p.m. | 3-370

Info Session: Appian
8:00 p.m. | 1-242

Coffee Chat: Mark43
8:00 p.m. | 2-131

Coffee Chat: Old Mission Capital
8:00 p.m. | 4-149

Tech Talk: Quora
8:00 p.m. | 4-163

Coffee Chat: Skydio
9:00 p.m. | 1-150

Info Session: Andreessen Horowitz
TBD | TBD

Samarth Mohan '16, once a novice, now a rising star for MIT's cricket club, looks to turn a corner

By Kishore Patra

Samarth Mohan '16, recalls playing "gully cricket" — a popular form of ad hoc cricket played in streets — growing up in India. In the narrow streets of New Delhi, Samarth managed to learn the basics of cricket as a sport but was never a part of an organized club team. He could have hardly imagined then that one day, he would go on to score a century for the MIT Cricket Club.

Cricket, while quite popular in many parts of the world, is rarely sighted being played in the U.S. The sport is relatively new for the American populace and has only a modest following in the Western Hemisphere, with the exception of the Caribbean islands. After Samarth moved from New Delhi to McLean, Virginia at the age of 13, "gully cricket" from his past stood as his only link to cricket. That is until one fine fall evening in 2014, when he saw some students playing on Jack Barry's field and decided to play with them. That was Samarth's first introduction to the group of cricket enthusiasts at MIT who would go on to form a more organized club sport. It was the first time Samarth played competitive cricket with a proper cricket ball, bat and protective gear. Samarth recalls being nervous playing with the hard leather ball in the beginning, but with regular practice he got comfortable and honed the skills that saw their beginning in the streets of New Delhi. He could hardly contain his exuberance when he earned a chance at representing MIT to compete against other local schools, including the likes of Harvard, Dartmouth and Northeastern and Boston University.

Samarth's best performance came in a crucial league game on the home ground of a tough opponent in the form of the University of Massachusetts Lowell, where he scored his first ever century in a competitive game. A century — a score of 100 runs by a batsman in a single game — is a rare feat in the T20 format. Only twice in the four years before Samarth's performance was the feat achieved by a member of MIT's Cricket Club. Samarth remembers breaking two bats throughout his belligerent innings that deflated UMass Lowell's confidence and ensured that MIT finished top of the table to win the American College Cricket Home and Away League for the second year in a row. Through the flawless batting performance, one memory in particular stands out for Samarth when he was batting on 96 with only one delivery remaining in the innings. Usman Ayyaz '17, then the captain of the team, walked up to Samarth and informed him that he was nearing his century and that he should go for a big hit. The final delivery was a full-toss that Samarth smashed through the covers for a boundary completing his century just as the innings closed. An insane sense of exhilaration took over him and the next thing he remembers is being inundated with jubilant hugs and high-fives by his teammates. Coming into the team with no experience of playing cricket with the leather ball, Samarth had achieved an amazing feat.

"To a newcomer, I would say that regardless of your experience, you will feel welcomed to the team. Honestly, I was one of the least skilled players when I joined the club. The leather ball was hard to play, but I always felt encouraged and guided by the more experienced members of the club. I think the cricket club has been an integral part of my life at MIT," said a modest Samarth when asked about his message to a new member of the club.

As MIT's Cricket Club gears up for a new season this fall, several new members have joined and Samarth, now from the vantage point of a seasoned member, looks forward to enhancing his experience with the club.

SPORTS BLITZ

Men's football (2-1) defeated Endicott College 31-26 this past Saturday.

Men's soccer (2-1-2) drew with Roger Williams University 1-1 last Wednesday, but followed up with a solid 4-1 victory against Wheaton College.

Women's soccer (7-0) remains undefeated after winning 2-0 against Roger Williams University and 1-0 against Wheaton College.

Women's volleyball (11-0) won both of their games last week 3-0, defeating Smith College and Simmons College.

Men's water polo (5-6) went 2-3 in the UC Davis Invitational last weekend with victories coming against University of the Pacific and Southern California.

Women's field hockey (5-1) lost their first game of the season 2-0 against Babson College.

Solution to Listen For It

from page 10

S	C	A	N		M	A	M	A		S	E	D	A	N
L	A	L	A		A	W	O	L		A	M	I	N	O
A	R	I	D		N	A	P	E		L	A	S	T	S
P	L	E	A	S	U	R	E	C	R	U	I	S	E	
S	O	N		L	A	D			I	D	L	E		
			E	E	L		I	T	S		S	N	I	T
S	H	A	V	E		A	C	H	E	S		T	O	O
T	E	L	E	V	I	S	I	O	N	C	R	E	W	S
A	R	T		E	N	T	E	R		A	U	R	A	S
R	E	E	D		S	I	R		A	R	M			
		R	O	M	E			A	G	E		P	R	O
	S	E	N	A	T	O	R	T	E	D	C	R	U	Z
R	E	G	A	L		S	E	W	N		H	A	L	O
E	M	O	T	E		L	E	A	D		E	D	E	N
V	I	S	E	S		O	K	R	A		F	A	R	E

Solution to Pset Party

from page 10

1	3	2	8	5	9	6	4	7
7	4	5	3	1	6	8	2	9
9	8	6	7	2	4	3	1	5
6	9	1	4	8	2	5	7	3
8	5	3	1	6	7	2	9	4
2	7	4	9	3	5	1	6	8
3	6	9	2	4	8	7	5	1
4	2	8	5	7	1	9	3	6
5	1	7	6	9	3	4	8	2

Solution to Disco Party

from page 10

1	4	5	6	2	3
2	5	6	1	3	4
6	3	4	5	1	2
5	2	3	4	6	1
3	6	1	2	4	5
4	1	2	3	5	6

Do you think you have conjunctivitis (pink eye)?

You and/or your child may be able to participate if you (or they):

- have had pink eye symptoms (e.g. redness, watering/ discharge, or irritation) in at least one eye for **no more than the past 3 days**
- are interested in taking part in a research study for up to 13 days
- are willing to travel to the study center for appointments.

Qualified participants may receive the non-antibiotic investigational drug and study-related procedures and visits at no cost. Health insurance is not required to participate.

To find out more, and to see if you qualify, call:

1-877-698-4294

[www.PinkEyeResearchStudy.com]

CTM_Alt Patient Color Print Ad [V01 USA]

2017 Next Wave Forum

Focus on

sustainable patient-centered biomedical and healthcare innovation

nextwave.mit.edu/poster

NEWDIGS NEW Drug Development ParadIGmS Initiative

APPLY NOW

STUDENT INVENTORS

WIN UP TO $15K FOR TECH-BASED INVENTIONS

The Lemelson-MIT Student Prize honors promising graduate students and teams of undergraduates around the country who have technology-based inventions in healthcare, transportation, food/water and agriculture, and consumer devices.

Prizes

$15,000 for graduate students!
$10,000 to undergraduate teams!
Exposure to investment and business communities!
A national media campaign!
A trip to MIT for an award celebration in June 2018!

Apply by September 29, 2017

lemelson.mit.edu/studentprize

Have questions? Contact Janell Ciemiecki at janellc@mit.edu

LEMELSON-MIT